BOOK REVIEW

STUESSY, TOD F. 1994. **Case Studies in Plant Taxonomy: Exercises in Applied Pattern Recognition.** (ISBN 0-231-07611-8, pbk.) Columbia University Press, New York. $25.00. 171 pp., 59 figures, 38 tables.

As an experienced instructor of plant systematics at both the introductory and advanced levels, Tod Stuessy has both perceived and sought to fill the gaps in instructional materials. He has been using case studies in his own graduate course for several years. Now he has edited the class exercises in a handy volume to be available for other instructors to use. It will serve as a valuable teaching resource for any one training young systematists or for self-instruction.

It is designed to be used in conjunction with a comprehensive text, such as Stuessy's, *Plant Taxonomy: The Systematic Evaluation of Comparative Data*, or with an instructor's free-standing lectures. However, his inclusion in the first three chapters of some basic concepts of systematics, taxonomy, classification, taxonomic hierarchy, genera, species, infraspecific categories, and the range of taxonomic data, allows the book to be used somewhat independently. Although I found these chapters to be redundant with introductory texts, they do not detract from the overall usefulness of the book. The first two chapters, in particular, give us insight into Stuessy's perspective on these concepts.

The remaining introductory chapter is a guided example of discerning taxonomic patterns. Insightfully, Stuessy directs students to pay attention to "(1) correlations of character states among taxa; and (2) discontinuities in character states between taxa." I was disappointed that he did not stress statistical analysis of characters to discern discontinuities in these examples. However, that problem is corrected in the actual case studies, which are rich in bar diagrams, character polygons, and scatter diagrams.

The majority of the book consists of 10 case studies representing original journal articles. The taxonomic problem, method, data sets, journal reference and a brief discussion of the possible solutions are provided, but the original authors conclusions are not. The student is expected to reach his or her own conclusion from the pattern perceived in the data. Comparisons among students and to the original paper are encouraged. The case studies progress from simpler to more complex and from data sets of morphology/geography to those also incorporating macromolecular data.

Overall, I think that Stuessy is successful in providing a set of exercises that give the advanced student experience with interpreting taxonomic patterns. Especially in light of the short time left for botanical exploration, increasing the rate at which students can achieve the skills to become practicing systematists makes this book is a welcomed addition to our training resources.—*Roger W. Sanders.*

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